

IN THE CLAIMS

1. (currently amended): An isolated polypeptide having at least one biological activity of Hairless wherein said polypeptide is encoded by a polynucleotide containing at least one human nucleotide sequence of at least 250 contiguous nucleotides of SEQ ID NO:1 selected from the group consisting of:

(a) a nucleotide sequence which hybridizes to SEQ ID NO:1 under stringent hybridization conditions at 65°C in a buffer of 500 mM NaHPO₄ pH 7.2, 7% SDS, 1% BSA, and 1 mM EDTA[.];

(b) a nucleotide sequence which is has greater than 98% identical identity to SEQ ID NO:1, and,

(c) a nucleotide sequence encoding at least 75 contiguous amino acids of SEQ ID NO:2, and

~~(d) a nucleotide sequence complementary to the nucleotide sequence of (a) or (b) or (c).~~

2. (previously presented): The isolated polypeptide of Claim 1, wherein said polypeptide has Hairless transcription factor activity.

3. (cancelled)

4. (previously presented): The isolated polypeptide of Claim 1, wherein the nucleotide sequence is at least 500 contiguous nucleotides of SEQ ID NO:1.

5. (previously presented): The isolated polypeptide of Claim 1, wherein the nucleotide sequence is SEQ ID NO:1.

6. (previously presented): The isolated polypeptide of Claim 1, comprising at least 100 contiguous amino acids of SEQ ID NO:2.

7. (previously presented): The isolated polypeptide of Claim 6, comprising at least 250 contiguous amino acids of SEQ ID NO:2.

8. (previously presented): The isolated polypeptide of Claim 1, wherein said polypeptide has the sequence of SEQ ID NO:2.

9. (cancelled)

10. - 19 (cancelled)

20. (previously presented): The polypeptide of Claim 1 further comprising a heterologous polypeptide domain.

21. (cancelled)

22. (previously presented): A method of screening in vitro for a chemical agent which modulates Hairless-mediated transcription comprising:

- (a) incubating a candidate chemical agent, the polypeptide of Claim 1, and a reporter construct comprising a transcription regulatory region responsive to Hairless transcription factor operably linked to a reporter gene;
- (b) measuring Hairless-dependent transcription of the reporter gene; and
- (c) identifying the chemical agent which modules Hairless-mediated transcription by a change in transcription of the reporter gene mediated by Hairless transcription factor activity.

23. (cancelled)

24. (cancelled)

25. (currently amended): A method of screening for a chemical agent which modulates binding between Hairless and thyroid hormone receptor comprising:

- (a) incubating a candidate chemical agent, the polypeptide

of Claim 1, ~~having Hairless transcription factor activity~~ having at least one biological activity of Hairless, and a polypeptide with thyroid hormone receptor activity;

(b) measuring binding of the polypeptide ~~with Hairless transcription factor activity of Claim 1~~ and the polypeptide with thyroid hormone receptor activity; and

(c) identifying the chemical agent which modulates binding between Hairless and thyroid hormone receptor by detecting a change in binding of between the polypeptide ~~with Hairless transcription factor activity of Claim 1~~ and the polypeptide with thyroid hormone receptor activity.

26. (currently amended): The method of screening for a chemical agent of Claim 25, wherein the polypeptide with Hairless ~~transcription factor~~ biological activity is a fusion polypeptide immobilized on a solid support.

27. (original): The method of screening for a chemical agent of Claim 25, wherein the polypeptide with thyroid hormone receptor activity is a fusion polypeptide immobilized on a solid support.

28. (previously presented): A method of screening for a chemical agent which modulates Hairless activity comprising:

(a) incubating a candidate chemical agent with a cell comprising the polypeptide of Claim 1,

(b) measuring Hairless gene or protein activity, and

(c) identifying the chemical agent which modulates Hairless activity.

29. (cancelled)

30. (original): The method of screening for a chemical agent of Claim 28, wherein Hairless activity is increased by the identified chemical agent.

31. (original): The method of screening for a chemical agent of Claim 28, wherein Hairless activity is decreased by the identified chemical agent.

32. (cancelled)

33. (original): The method of screening for a chemical agent of Claim 28, wherein the identified chemical agent modulates Hairless protein activity.

34. (currently amended): An isolated polypeptide having at least one biological activity of Hairless wherein said polypeptide is encoded by a polynucleotide containing at least one human nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence which is greater than 98% identical to SEQ ID NO:1, and

(b) a nucleotide sequence encoding at least 75 contiguous amino acids of SEQ ID NO:2, ~~and~~

~~(c) a nucleotide sequence complementary to the nucleotide sequence of (a) or (b);~~

wherein the nucleotide sequence is at least 50 nucleotides in length.